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Occupational survey of Storm Lake, Iowa, with implications for vocational education

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OCCUPATIONAL SURVEY OF STORM LAKE, IOWA
WITH IMPLICATIONS FOR VOCATIONAL EDUCATION

by

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INTRODUCTION

This is a generation that is dependent upon education to shape its destiny. Choice and amount of education will shape the future of each individual. Without education, mankind will become dependent upon society; with education each individual can contribute to the support and progress of society.

Day by day workers are feeling the effect of automation and cybernetics on the availability of jobs. Many jobs have been taken completely over by machines and computers. The result is not usually a loss in jobs, but a need for re-training the workers to prepare them for different jobs. The youth of our nation are the ones who need to be aware of this and prepare themselves for jobs with futures. George B. Leonard (4, p. 37), Look Senior Editor, describes the situation in this way:

> During this decade, a record 26 million young people will enter the nation's already overloaded labor force. At most, two out of ten will be college graduates, even if college enrollments double. The remaining eight out of ten -more than 20 million- will be high-school drop-outs, high-school graduates and those who fail to finish four years of college. Every available study of the job market shows that from this 20 million will come most of our unemployed.
>
> A growing number of experts are using these figures to argue that our schools must turn to the immediate needs of the majority, must train them for specific jobs rather than prepare them for college.

Increased awareness of this situation is being indicated on all levels of government. The federal government is coming to the aid of the local schools to help overcome a dangerous situation. How can this unemployment be reduced? The Kiplinger magazine, "Changing Times"

([5], p.11) describes a partial solution to this problem:

> Manual workers, the mechanics, repairmen, building craftsmen and others who form about a third of the labor force, may expect a favorable job future- if they are skilled or semi-skilled. The unskilled haulers, hoisters, diggers, loaders and unloaders will see their livelihoods hit hard by further automation.
>
> There is a moral in all job outlook facts reported on these pages. It's a simple point: "Stay in school". Why? Because it may mean the difference between having a job and going on relief. Statistics show that young workers with less than eight years of school have an unemployment rate seven times that of college graduates. And the least skilled worker is seven times more likely to be unemployed than people in the professions.

High schools need to develop a curriculum that is suitable not only to the college preparatory student, but also to the students who want to prepare for a job. The federal government encourages this by financial support for Vocational Education, but it is up to the local schools to start and maintain adequate programs. The opportunity should be available for any youth to participate in the preparation for a job of his choice. The need for education for all students cannot be over-emphasized.

The Problem on the Local Level

Storm Lake is located in northwest Iowa at the junction of highways 5 and 71. "The City Beautiful", as it is locally referred to, had a population of 7,728 ([6], p. 17-27) in 1960, and is the county seat of Buena Vista County. Storm Lake is also the name of the 3,000-acre lake near which the city is located.

The retail trade area surrounds the town in a twenty-mile radius

and is based primarily upon agriculture. The two major industries are Hygrade Food Products Corporation, a meat packing plant and Vilas and Company, a turkey processing plant. Industries based on other products are not predominate in this area but are increasing in number and size quite rapidly.

The public educational system consists of five grade schools, one junior high school and one high school. The high school consists of grades ten, eleven and twelve and contains an enrollment of approximately 450 students. Buena Vista College, a four year liberal arts college, is also located in the city.

The high school has vocational programs in the homemaking, office education, secretarial training and destributive education areas. The fact that trade and industrial education is not included constitutes the basis for this research.

This survey was conducted in conjunction with the Storm Lake Community Schools to try to determine the community needs and interest in trade and industrial education.

Objectives

The objectives of this study are as follows:

1. To survey the need for establishing a Vocational Industrial Education program in Storm Lake, Iowa.
2. To determine the training agencies available in Storm Lake.
3. To determine the employment opportunities for students.
4. To secure information concerning the adequacy and availability of employees now present.

Definition of Terms

The following terms have been defined to assist the reader. These definitions have been taken from the "Dictionary of Education" (2) unless otherwise noted:

1. Automation: the process of replacing manual control equipment with mechanical or electrical equipment, especially when computing or decision processes are involved.
2. Cooperative education: a program that provides for alternation of study in school with a job in industry or business, the two experiences being so planned and supervised cooperatively by the school and the employer that each contributes definitely to the student's development in his chosen occupation; work periods and school attendance may be on alternate half-days, days, weeks, or other periods of time.
3. Cybernetics: a word coined to describe the entire field of control and communication theory, and especially of the mathematical analysis of control mechanism; the problems are usually characterized by feedback such that the operation of the control mechanism depends upon its own output; also included are problems of coding and of signal detection in the presence of noise and physiological problems of the nervous system.
4. Labor force: those persons who work either as full time or part-time employees, including the Armed Forces, or as self-employed and persons who are unemployed and actively looking

for work. Excluded are the persons under 14 years of age because of child labor and school attendance laws (8, p. 13).

5. Skill - trade: (1) the ability to perform the manipulative operations connected with a given trade; (2) the ability to perform a certain manipulative operation connected with a given trade.
6. Society: (1) an enduring, cooperating social group (generally of human beings) so functioning as to maintain and perpetuate itself; (2) any group, but especially a nation, consisting of human beings who are relative similar in race, and culture, who have more or less clearly recognized common interests, and who cooperate in the pursuit of these interests.
7. Technical education: a type of education that emphasizes the learning of a technique or technical procedures and skills and aims at preparing technicians, usually above the high school level but not leading to a degree.
8. Trade and industrial education: a phase of vocational education, of less than college grade, suitable to the needs of prospective and actual workers in the fields of manufacturing, industry, and trades.
9. Vocational education: a program of education below college grade organized to prepare the learner for entrance into a particular vocation or to upgrade employed workers.

REVIEW OF LITERATURE

The continuing demand upon society to prepare young workers to earn a living has prompted much interest and concern. Much of the concern is expressed in the desire for education to shoulder the responsibility for preparation of all workers for gainful employment. Increasing technology and an increasing number of young people coming into the labor force has been the subject of considerable research. The "Occupational Outlook Handbook" (8, p. 13) states:

> From 1960 to 1975, the labor force will grow even faster than the population as a whole, mainly because of the large number of young people reaching working age. From 73 million in 1960 the labor force is expected to grow, by 1975, to 93 million, an increase of 20 million or 20 percent. At the same time, the population will grow about 25%.

The preparation of these young people must be for future occupations. The trend in occupations seems to be: (1) a growth in the white collar occupations, especially the technical and professional occupations, (2) average growth in skilled occupations, (3) slower-than-average growth in the semi-skilled occupations, (4) no growth in the unskilled occupations, (5) above-average growth in service workers and (6) a further decline in farmers and farm laborers.

The "Occupational Outlook Handbook" (8, p. 25) contains the following advice:

> It is clear that multitudes of opportunities will be open for job-seekers during the years ahead. The ability of young people to embrace these opportunities, however, will depend to an important extent on their education and training. The job world of the future obviously calls for people

who have a marketable skill. The day of the "I can do anything" applicant is definitely past.

> Young people who have acquired a skill or a good basic education will have a better chance at interesting work, good wages, steady employment, and greater satisfaction with life in general. Getting as much education and training as one's ability and circumstances permit should, therefore, be high on the list of things to be done by today's youth.

The role of education in the training of these youth is becoming increasingly complex. Colleges are being filled to capacity, and the responsibility must be shifted to other types of training and education. A panel of consultants on Vocational Education (7) considered the needs of all nonprofessional workers. They feel that it is especially important for the 26 million new workers to be able to adapt to the needs of a changing economy. This panel stated the following general recommendations (7, p. XVII).

1. Offer training opportunities to the 21 million non-college graduates who will enter the labor market in the 1960's.

2. Provide training or retraining for the millions of workers whose skills and technical knowledge must be updated, as well as those whose jobs will disappear due to increasing efficiency, automation, or economic change.

3. Meet the critical need for highly skilled craftsmen and technicians through education during and after the high school years.

4. Expand vocational and technical training programs consistent with employment possibilities and national economic needs.

5. Make educational opportunities equally available to all, regardless of race, sex, scholastic aptitude, or place of residence.

The need for education to assume the responsibility for training young workers is apparent on the local level, also. In a pilot study of twelve north Iowa counties, Trevor Howe (3, p. 155) found an interest and a need on the part of the students for vocational-technical education:

> The respondents indicated their desire to enroll in a technical, trade or vocational training program, if it had been offered under various alternative conditions. The conditions and the percent, "yes" responses were as follows: at the high school attended 70 percent; at a nearby center for one-half days, transportation furnished 63.8 percent; at a center 30-60 miles, full time, tuition paid, other costs paid by students 44.9 percent; at a center 30-60 miles, full time all costs paid by the student 11.7 percent.

Regarding the content of the trade and industrial courses desired in high school, Trevor Howe (3, p. 152) found the following results:

> Vocational trade and industrial courses high school students would have taken had they been offered in high school were considered one at a time and the interest indicated by male respondents in descending order were as follows: auto mechanics 66.6 percent, electricity 62.4 percent, welding 61.5 percent, drafting 46 percent, sheet metal 34 percent, machine shop 16.5 percent, printing 13.3 percent, cooperative program 13.1 percent, and cabinet making and millwork 9.1 percent.

In a similar study of four northwest Iowa counties, Ivan Dale Van Ommeren (9) found similar results. A result of this study was that 70 percent of the respondents indicated an interest in technical, trade or vocational training in the high school. In the discussion, Ivan Van Ommeren (9, p. 63) states:

> As the vocational-technical problem becomes more acute, state and local educational bodies will have to search themselves for the answer. A study of existing vocational programs in the four county area shows a satisfactory job is being done in vocational agriculture, home economics, and general business education. Beyond

these course offerings, little is available in the immediate area for the youth seeking vocational or technical training in occupations not in this catagory.

Over one-third of the respondents made a definite vocational choice in the high school. It is noteworthy that over one-half of these are presently working in their high school vocational choice.

In a survey of businesses and industries in these same four northwest Iowa counties, Glen Orville Fuglsby (1) found information concerning the need for employees and employee training. The highlights of this investigation are: (1) that total industrial employment will increase nearly 12 percent and that an increase in each of the occupation groups is expected in the next five years, (2) that the number of unskilled workers will increase, (3) that there is considerable employer interest in the training and education of his employees, (4) that only 1.5 percent indicated cooperation in the Trade and Industrial Cooperative Training Program but that 20 percent indicated they would like to participate, (5) that a rather small number of jobs require less than a high school education, and (6) that employers indicated that qualified workers were not available.

In summarizing these studies, the following points are presented:

1. The labor force will grow faster than the population in the next ten years.
2. The labor force will need more education and training to be gainfully employed.
3. Young persons who have acquired a skill or a good general education will have wider job opportunities.

4. Young people are desirous of trade, vocational and technical training in high school.
5. It is the responsibility of the schools to provide adequate curricula for all students.

METHOD OF PROCEDURE

One of the recommendations of the Division of Vocational Education of the Department of Public Instruction for starting a vocational education program in the trade and industrial area is a community survey to determine if the program is feasible. This study was designed to find information that was relevant to the establishment of such a program.

In the selection of the population to be interviewed, it was decided to include those employers in the city who were working in the trade and industrial area. Because the program was to be restricted to the trade and industrial area, it was felt that these employers could provide the necessary information. The local telephone directory and the Storm Lake Chamber of Commerce were instrumental in obtaining the names and addresses of the employers to be interviewed.

Each trade or industry was to be included, in its entirety, as one unit, with the exception of the food processing industries. It was felt that the production line workers in these industries did not fit into this category due to the type of work and the seasonal effect. The maintenance staffs were included in the survey in these cases.

A schedule was developed to assist the interviewer in obtaining the desired information. After several discussions with persons working in the vocational education areas and a review of questionnaires used in similar studies, it was decided to divide the schedule into three areas: (1) information regarding present employees, (2) information regarding

future employment, and (3) information regarding employer attitudes and cooperation in a vocational trade and industrial education program. The questions needed to determine the information desired in each area were formulated and the schedule finalized.

Sample interviews were conducted with five employers. The wording of a few questions was changed as a result of these interviews. It was decided that the interviews were best accepted by the interviewer's making a preliminary call on each employer to explain the study. Then the employer was given the choice to complete the interview or to make an appointment for completion of the interview at another time. By the interviewer's selecting a time when the employer was not so busy, most of the interviews were completed on the first call.

Data collected were recorded on a data sheet. From this sheet the tables were formulated. It was decided to divide the schedules into six areas for treatment: (1) wood area, those trades and industries based primarily on wood and wood products; to include contractors, painters, plasterers, lumber yards and decorators, (2) metal area, those trades and industries based primarily on metal and metal products; to include sheet-metal, plumbing, heating, welding, processing, ornamental iron and body shops, (3) electricity-electronics area, those trades and industries based primarily on electricity and electronics; to include construction, telephone service, radio and television repair and motor rewinding, (4) mechanics area, those trades and industries based upon mechanical work; to include service stations, garages and implement re-

pair, (5) food processing area, those trades and industries based primarily on food processing, and (6) general area, those trades and industries based on other products; to include glazing, refrigeration and sign service.

FINDINGS

The following data were compiled from the schedules made during the interviews of 83 employers in the trade and industrial area of work in Storm Lake, Iowa. The findings are arranged in three primary catagories: employer attitude and cooperation in a vocational cooperative program, present employees, and future employment.

Employer Attitude and Cooperation in a Vocational Cooperative Program

Industrial areas classified by the number of employers

In Figure 1, the areas are classified by the number of employers interviewed in each area. The mechanics area is the largest, contributing 39% of the employers. The wood and metal areas are close seconds contributing 20% and 19% respectively.

Employer support for a vocational trade and industrial cooperative program

As noted in Table 1, 90% of the employers indicated support for a vocational trade and industrial cooperative program. This shows a definite interest, on the part of the community, in this type of program and is an indication of the cooperation that can be expected. It is important to note that the support is favorable in all areas.

Staff and facilities available as training stations

The 53% "yes" responses indicated in Table 2, is considerably lower than the "yes" responses in the previous table. Another 13% indicated that they might be willing to cooperate depending upon the situation at the time. Training stations are available in all of the areas.

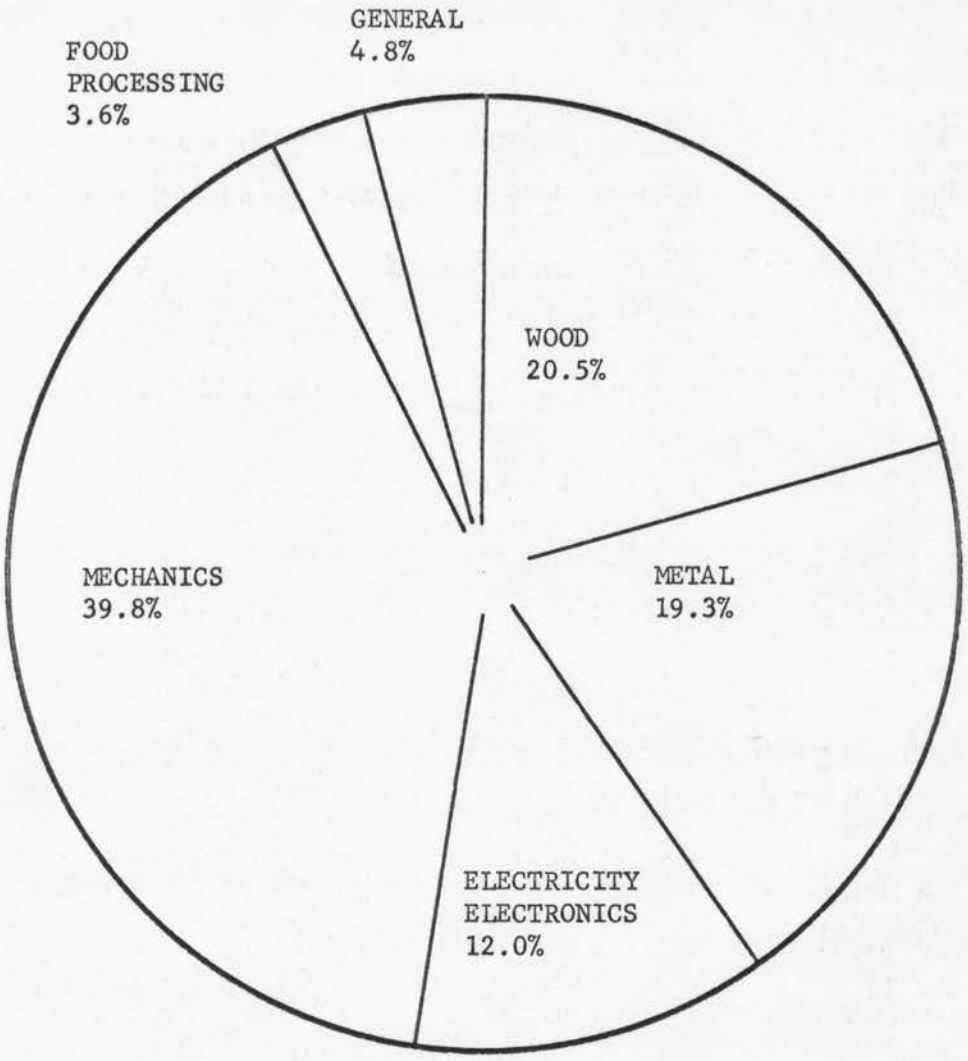

Figure 1. Industrial areas classified by the number of employers

Table 1. Employer support for a vocational trade and industrial cooperative program

Industry	Yes	No	No response
Wood	17	0	0
Metal	14	2	0
Electricity-Electronics	8	2	0
Mechanics	30	3	0
Food Processing	2	1	0
General	4	0	0
Total (83)	75	8	0
Percent (100)	90.36	9.64	00

Table 2. Availability of training stations by industries

Industry	Yes	No	Possible	No response
Wood	6	6	5	0
Metal	10	5	1	0
Electricity-Electronics	3	6	1	0
Mechanics	23	8	2	0
Food Processing	1	2	0	0
General	1	1	2	0
Total (83)	44	28	11	00
Percent (100)	53.01	33.74	13.25	00

Table 3. Willingness of the employers to hire graduates of the cooperative program

Industry	Yes	No	Possible	No response
Wood	16	1	0	0
Metal	14	2	0	0
Electricity-Electronics	6	4	0	0
Mechanics	26	6	1	0
Food Processing	2	1	0	0
General	3	1	0	0
Total (83)	67	15	1	0
Percent (100)	80.72	18.07	1.21	00

Willingness of the employers to hire graduates of the cooperative program

It is interesting to note that 80% of the employers expressed interest in hiring graduates from a cooperative program. This verifies the fact that employers are interested in the program and willing to cooperate. Only 18% of the employers indicated a definite "no" response. The mechanics, wood and metal areas contain the majority of "yes" responses.

Willingness of the employers to serve on an advisory committee

A wide variety of personnel indicated a willingness to serve on an advisory committee, as shown in Table 4. Over 45% of the employers expressed consent to serve on such a committee if asked. The distribution of "yes" responses was uniform. Over 45% of the employers were unable or unwilling to serve on an advisory committee.

Table 4. Willingness of the employers to serve on an advisory committee

Industry	Yes	No	Possible	No response
Wood	5	10	2	0
Metal	6	7	3	0
Electricity-Electronics	5	5	0	0
Mechanics	19	13	1	0
Food Processing	1	2	0	0
General	2	1	1	0
Total (83)	38	38	7	0
Percent (100)	45.87	45.78	8.44	00

Present Employees

Table 5. Number of full time employees working in the trades and industries

Industry	Number employed	Percent
Wood	133	35.37
Metal	51	13.56
Electricity-Electronics	43	11.44
Mechanics	107	28.46
Food Processing	39	10.37
General	3	.80
Total	376	100.00

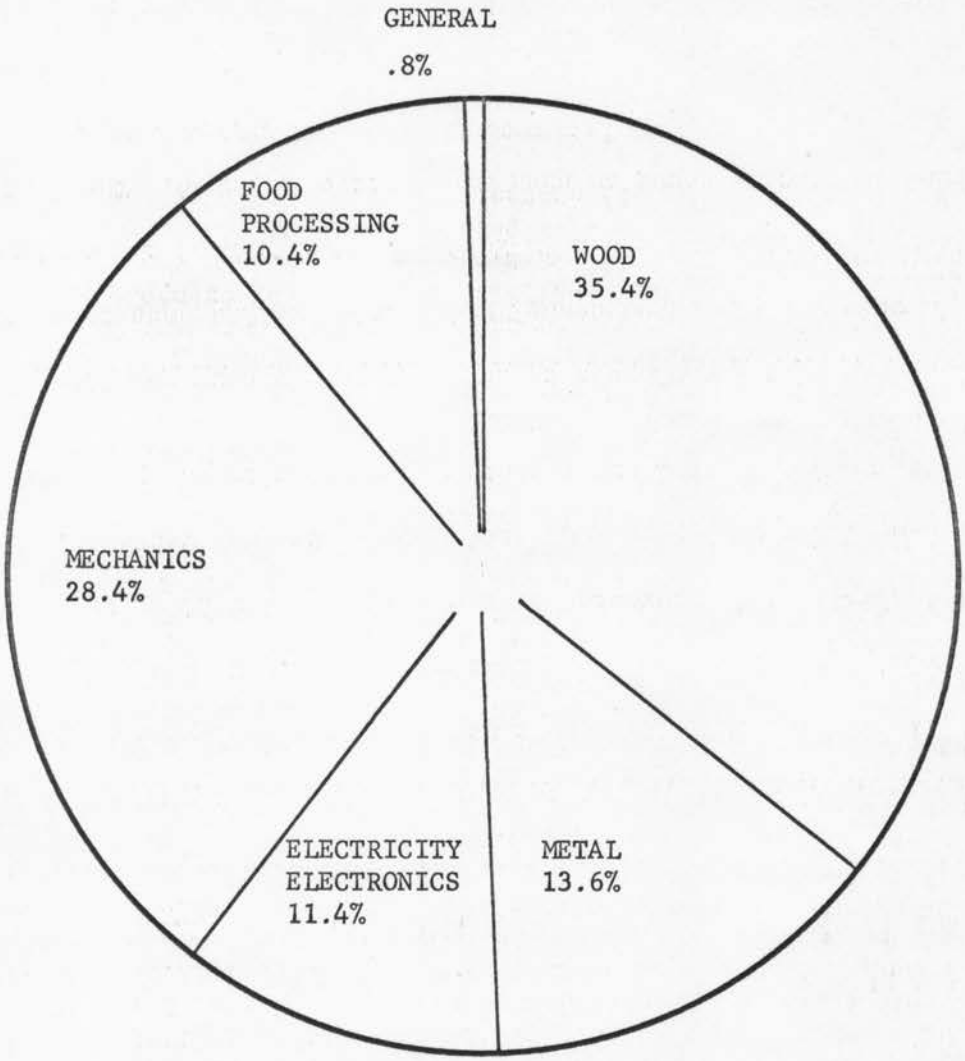

Figure 2. Industrial areas classified by the number of employees

Table 6. Hiring seasons of the industries

Industry	Seasons				Not seasonal	No response
	Fall	Winter	Spring	Summer		
Wood	0	0	0	3	14	0
Metal	1	0	0	0	15	0
Electricity-Electronics	0	1	0	0	9	0
Mechanics	0	0	0	8	24	1
Food Processing	0	0	0	1	1	1
General	0	0	0	2	2	0
Total (83)	1	1	0	14	65	2
Percent (100)	1.20	1.20	00	16.87	78.32	2.41

Industrial areas classified by the number of employees

In Figure 2, the areas are classified by the number of employees that are present in each area. The wood area has 38% of the employees. This area, however, was second to the mechanics area in Figure 1. The mechanics area has 28% of the employees.

Number of full time employees working in the trades and industries

The distribution of employees is shown in Table 5. The wood industries contain the largest number of employees. A few large contracting firms provide the majority of these workers. The mechanics area contributes the next largest number, which is logical when one considers the number of industries contributing to this figure. If the production line

Table 7. Need for up-grading present workers which the employer cannot do

Industry	Yes	No	No response
Wood	4	13	0
Metal	3	11	2
Electricity-Electronics	6	4	0
Mechanics	17	14	2
Food Processing	1	1	1
General	1	2	1
Total (83)	32	45	6
Percent (100)	38.55	54.22	7.23

workers were added to the food processing group, it would be considerably larger than any of the other groups.

Hiring seasons of the industries

It is interesting to note that many of the trades and industries that once were considered very seasonal are now considered not seasonal. Over 78% of the employers interviewed indicated that their need for employees is not seasonal. It was quite surprising to note that the highest percent of responses that indicated that their work was seasonal was in the mechanics area. It was expected that summer would be the busiest season for those industries considered seasonal.

Table 8. In-service training programs for the training of new workers

Industry	Yes		No	No response
	local	non-local		
Wood	0	0	17	0
Metal	1	2	13	0
Electricity-Electronics	0	6	4	0
Mechanics	0	18	13	2
Food Processing	1	0	1	1
General	1	0	2	1
Total (83)	3	26	50	4
Percent (100)	3.61	31.33	60.24	4.82

Table 9. Need for adult night school to up-grade present employees

Industry	Yes	No	No response
Wood	4	13	0
Metal	5	10	1
Electricity-Electronics	5	5	0
Mechanics	14	16	3
Food Processing	1	1	1
General	0	3	1
Total (83)	29	48	6
Percent (100)	34.94	57.83	7.23

Need for up-grading present employees which the employer cannot do

Of the 83 industries interviewed, 32% indicated a desire for assistance in up-grading their present employees and 45% indicated they did

Table 10. Subjects the employers desire in adult night school

Subjects	Industries	
	N	%
General mechanics	9	10.9
Electricity	6	7.2
General construction	3	3.6
Salesmanship	3	3.6
Plumbing	3	3.6
Metalworking	2	2.4
Public relations	1	1.2
Refrigeration	1	1.2
Welding	1	1.2
No response - not applicable	54	65.1
Total	83	100.0

not need assistance in up-grading their employees. The area of mechanics has the highest indication of need for assistance. The metals area has the highest percentage of "no" responses.

In-service training programs for the training of new workers

In-service training programs are not prevalent on the local level. Only three percent, according to Table 8, have any form of in-service training on the local level. Twenty-six percent indicated an in-service training program was available, but not locally. These training programs were primarily sponsored by the major company and were quite distant.

Table 11. Average number of hours worked per week by the employees

Industry	Hours						
	35 to 39 N	40 to 44 N	45 to 49 N	50 to 54 N	55 to 59 N	over 59	No response
Wood	0	3	3	11	0	0	0
Metal	0	3	2	8	1	0	2
Electricity-Electronics	0	7	2	1	0	0	0
Mechanics	0	2	6	9	5	6	5
Food Processing	0	1	0	2	0	0	0
General	1	1	0	1	0	0	1
Total (83)	1	17	13	32	6	6	8
Percent (100)	1.21	20.48	15.66	38.55	7.23	7.23	9.64

Very little use of these services was indicated in the interviews. The 50% indication of no in-service training program available can be an indication of a need for training in the high schools.

Need for adult night school to up-grade present employees

Thirty-five percent of the employers indicated an interest in adult night school classes. It is interesting to note that the industries based on wood and wood products had a very low percentage of "yes" responses. This is an area that generally is applicable to adult night school. Fifty-seven percent indicated that there was no need for adult night school to up-grade the present employees.

Subjects the employers desire in adult night school

As noted in Table 10, the most favorable response for adult night

Table 12. Fringe benefits received by employees

Benefit	Industries	
	N	%
Life insurance	15	18.07
Health insurance	13	15.66
Vacation time	41	49.40
Sick leave	7	8.43
Merchandise discount	27	32.53
None - no response	32	38.55

school classes was in general mechanics. It is important to note that this was the employer's response and not that of the employees. General mechanics and electricity are the areas with the greatest potential for employee training.

Average number of hours worked per week by the employees

The average number of hours worked per week, as noted in Table 11, ranges from below 40 to over 60. The greatest percentage of employees work between 50 and 54 hours per week. The electricity-electronics area has the most employees working between 40 and 44 hours per week. The mechanics area has the highest number of employees working over 50 hours per week.

Fringe benefits received by employees

The required insurance programs such as Workmens Compensation are not included in this table. It is important to note that some of the industries do offer more than one fringe benefit. The figures given are minimum

Table 13. Qualities employers admire most in an employee

Quality	Industry	
	N	%
Honesty	29	34.93
Cheerfulness	1	1.21
Appearance	3	3.62
Promptness	0	.00
Loyalty	9	10.84
Desire to work	11	13.25
Desire to learn	13	15.66
Aggressiveness	1	1.21
Attitude toward safety	4	4.82
Other	4	4.82
No response	8	9.64
Total	83	100.00

and can be used to give a general idea of the benefits available. The fringe benefit most common in the trades and industries is vacation time. This is allowed in 49% of the cases. Some form of merchandise discount is given to the employees in 32% of the cases.

Qualities employers admire most in an employee

As noted in Table 13, over 34% of the employers indicated that honesty was the quality they admired most in an employee. The desire to work and the desire to learn were close seconds. This was a hard question for the employer to answer by restricting his selection to one choice.

Table 14. Qualities the employers feel the new employees lack most

Quality	Employer	
	N	%
Honesty	1	1.21
Cheerfulness	2	2.41
Appearance	6	7.23
Promptness	2	2.41
Loyalty	2	2.41
Desire to work	15	18.07
Desire to learn	8	9.64
Aggressiveness	10	12.05
Attitude toward safety	0	.00
Other	5	6.02
No response - not applicable	32	38.55
Total	83	100.00

Qualities the employers feel the new employees lack most

Thirty-eight percent of the employers indicated that this did not apply or that they would not respond. The desire to work and aggressiveness were the two qualities that were lacking most in new employees. Appearance was indicated by six employers, which is relatively low in light of the notoriety the young people are receiving on this quality. None of the employers indicated that new employees were lacking in the proper attitude toward safety.

Future Employment

Table 15. The availability of workers with the qualities desired

Industries	Yes	No	No response
Wood	2	15	0
Metal	1	13	2
Electricity-Electronics	1	9	0
Mechanics	4	28	1
Food Processing	1	2	0
General	0	4	0
Total (83)	9	71	3
Percent (100)	10.84	85.54	3.62

Table 16. The availability of trainable workers

Industry	Yes	No	No response
Wood	2	14	1
Metal	8	6	2
Electricity-Electronics	3	3	4
Mechanics	16	14	3
Food Processing	1	2	0
General	1	3	0
Total (83)	31	42	10
Percent (100)	37.35	50.60	12.05

Table 17. Primary sources of recruitment of new workers

Sources of recruitment	Trades and industries N	%
State Employment Service	18	21.69
Community Agency	0	.00
Private Agency	1	1.20
Voluntary Appointment	14	16.89
Reference of friends or employees	27	32.53
High School	0	.00
Technical Schools	1	1.21
Colleges	2	2.41
Advertising	7	8.43
Others	3	3.61
No response - not applicable	10	12.05
Total	83	100.00

The availability of workers

Over 85% of the employees indicated that workers are not readily available with the qualities desired. All of the areas indicate a shortage of qualified workers with the mechanics area in the greatest need. These figures indicate a need for training facilities to provide workers for the trades and industries.

The availability of trainable workers

The results in Table 16 are similar to those in Table 15. Forty-two percent indicated that trainable workers are not available. The mechanics area figures tend to show that more workers are available in this area

Table 18. Employment needs 1966, and 1971

Industry	Vacancies 1966	Employment change 1971
Wood	35	35
Metal	9	35
Electricity-Electronics	7	15
Mechanics	24	42
Food Processing	11	15
General	0	5
Total	86	147

than in the others. A shortage of workers of all kinds in the trades and industries seems to exist.

Primary sources of recruitment of new workers

Over 32% of the industries relied on reference of friends of the employer or his employees for their source of recruitment of workers as shown in Table 17. In general this is true in each of the trade and industrial areas. The State Employment Service is used in over 21% of the cases and was stated as a secondary source in many of the other cases.

Employment needs 1966 and 1971

In Table 18, the employers indicated that there was a need for 86 new employees in 1966. These employees are needed in all but the general area. The number of new employees needed was projected to be 147 by 1971. The metal area shows the greatest potential growth.

Table 19. Minimum education desired in prospective employees

Industries	Less than h.s.	H.s. or equiv.	Trade voc. sch.	College grad.	No response
Wood	10	7	0	0	0
Metal	8	5	0	0	3
Electricity-Electronics	1	4	4	0	1
Mechanics	8	20	3	0	2
Food Processing	1	0	1	0	1
General	2	1	1	0	0
Total (83)	30	37	9	0	7
Percent (100)	36.15	44.58	10.84	.00	8.43

Table 20. Experience employers desire in an employee

Industry	No training	To one year	Over one year	Apprentice training	No response
Wood	5	1	9	2	0
Metal	5	0	7	1	3
Electricity-Electronics	3	0	4	2	1
Mechanics	10	3	17	1	2
Food Processing	0	0	1	1	1
General	1	0	3	0	0
Total (83)	24	4	41	7	7
Percent (100)	28.92	4.82	49.40	8.43	8.43

Minimum education desired in prospective employees

It is interesting to note that jobs are available for students without a high school education. The jobs in this column are the non-skilled type, however. The greatest need seems to be for a minimum of a high school education. The employers in the electricity-electronics and mechanics areas desire some trade school for the employees. None of the employers require college-trained employees.

Experience employers desire in an employee

Over one year of experience is desired by most of the employers. The need for apprentice training is indicated in only a few cases and does not include the total of any group. In some of the cases the experience could be overcome by some type of trade training. Many of the employers do hire employees without experience but prefer the experienced employees if a choice is available.

DISCUSSION

A considerable amount of interest was shown by the employers in the interviews and discussions. The topic of vocational education has had much impetus lately due to the state-wide location of area schools. The question often arose as to the relationship between a high school vocational program and the area school program. The explanation used was that vocational education in high school was a good step in preparation for further training of the vocational nature. Several employers expressed a desire for an area school to be located in Storm Lake and felt that this school would be of extreme value to the community. The interest is carried over to the vocational program in high school. The high school program would be terminal, as far as formal education, for many of the students. From this, they would go into on-the-job training or in-service training. In any case, the preparation of the student in high school would be valuable regardless of the next step.

The interest of the community in trade and industrial education is exemplified by the high percentage of employers who indicated support of the cooperative program. Many of the employers indicated that they would be unable to provide training programs for the students because of various reasons. Some of these reasons were: that the work would be too far from the school; that the facilities were not adequate for training a student; and that the student would not be of sufficient value to the employer without further training. Some feelings were expressed that

the high school student was incapable of selecting a vocation until later in life.

An adequate number of training stations are available for a cooperative program to be initiated. The jobs are available for the students upon graduation and the employers expressed a preference for employees with this type of training. From the point of view of the community, the program is feasable.

The need for employees in the community at the time of this writing, was critical. This has been attributed to two general reasons. First, the Viet Nam situation is taking many young potential employees from the community. The number of men in the services has risen steadily over the past few years. There seems to be no indication of a change in this situation in the near future. Second, the different wage factor between union employees and non-union employees forces many of the men to take non-union jobs for a short period of time and then switch to a union-affiliated job. This takes several men each year from the trades. The only solution to this problem is to bring about equal wages or benefits. Many of the employers stated that they could not compete in the economy if they were forced to pay wages equal to the union scale. There is no quick solution to this problem and only in time will it be solved.

All of the trades and industries were short of highly skilled employees. The opportunities seem unlimited for the student that is willing to take the time to learn and develop a skill in his trade. Too many young employees are switching to find suitable jobs. This not only

limits the skill to be developed but slows down the process of climbing to the top. If a young man does not choose his vocation early, it becomes increasingly hard to become proficient at a job.

Adult night school was a subject of interest to the employers but the need for training the present employees did not seem to be of great concern. The problem is to get the employees to attend an appropriate program. In the past, when appropriate programs were offered, the classes were not sufficiently filled to hold the class. Time seemed to be the factor in most of the cases where the employee expressed a desire to come but did not enroll. The time factor is of the essence to the employee and he does not wish to take his evenings for this reason. The need seems to be for more classes that can be attended during the day, with some support from the employers or the government. Such a program, the bricklayers training program, was conducted in Storm Lake recently with considerable success. More training programs such as this are needed and should include several of the trades.

One trait that was noticed during many of the interviews was the employer's loyalty to his employees. This was expressed in many ways. In the answers to the questions concerning the qualities lacking in applicants and the questions about training needed by the present employees, most of the employers expressed the fact that their present employees were doing a good job and were not lacking in any way. The concern expressed was that there did not seem to be replacements coming into the field for future needs.

The growth in the next five years looks favorable. The one factor of interest that was noticed was the distribution of this growth. There seemed to be some indication that employers either wanted to remain small or to grow quite rapidly. Many of the trades or industries are more effective in small groups. The trend in the light construction areas is for the contractor to sub-let many of the jobs to other crews and retain only a small crew to complete the details.

There was some indication by the employers to desire a minimum of high school education for their employees. Because of the shortage of workers at this time, many employers were willing to hire employees with less than a high school education. Some of the employers stated that desirable results had been obtained by hiring employees with less than a high school education, but that a vocational program in the high school would have benefited the employee and may have had a favorable effect on his remaining in school.

From the community standpoint, a vocational cooperative program in the trade and industrial area is not only feasable, but very desirable. The need for training is evident and the cooperation of the employers can be expected.

Recommendations for further studies are as follows:

1. To investigate and determine the needs and desires on the part of the students for vocational trade and industrial education.
2. To investigate and determine the curriculum in trade and

industrial education area that would best suit the student and employer.

3. To develop a uniform instrument to be used as a check-list for determining the feasibility of a vocational program.
4. To investigate and determine the feasibility of conducting a cooperative program in the summer.

SUMMARY

The primary purpose of this study was to survey the community to see if it was feasable to start a vocational trade and industrial co-operative program in Storm Lake, Iowa. In addition, it was designed to determine what the high school should be doing in vocational education to assist the community in up-grading present employees.

The approach to this problem was to personally interview each employer working in the trades and industries. A total of 83 employers were chosen. The information desired was to determine the cooperation of the employers in providing training stations for the students, to determine the qualifications of present employees, and to determine the conditions and outlook for future employment.

Employer Attitude and Cooperation in a Vocational Cooperative Program

The response for support of a cooperative training program was very good. Over 90% of the employers interviewed expressed support and interest for this program. Out of the 83 employers contacted, 44 expressed willingness to provide training stations for students if contacted. Another 11 were interested in providing training stations if the conditions of employment were satisfactory at the time. These training stations were well distributed in the areas of wood, metal, electricity-electronics, mechanics, food processing, glazing and sign service.

The job situation available for students completing a cooperative training program looks favorable. Over 80% of the employers expressed

a desire to hire employees with this type of training. It was encouraging for the student and the school to know that training stations and jobs were available for those students interested in following this curriculum in high school.

Thirty-eight employers expressed a willingness to serve as consultants on an advisory committee if they were contacted. This committee could be representative of employers from each of the trade and industrial groups. Another seven employers expressed interest and willingness to serve if their working conditions were such as to allow them to attend the meetings when scheduled.

Present Employees

There were 376 employees working in the six areas listed. This excluded the persons interviewed, the production line workers in the food processing area, and employees in the business or clerical part of the trade or industry.

The hiring seasons of the trades are becoming less seasonal each year. With improved methods in controlling the climate for work, much more work can be done during all seasons. Over 78% of all the employers stated that they did not consider their work to be seasonal. This is a much higher figure than would have been anticipated 20 years ago.

The need for up-grading present employees was not as great as was anticipated. Only 38% of the employers expressed a need for help in up-grading their employees. The training units available to the employers

were: in-service training programs available locally in three percent of the cases, and in-service training programs available on a company basis, not locally, in 31% of the cases. However, there was little indication of these training programs being used.

About one-third of the employers expressed a desire for adult night school to help train the employees. The prominent areas were general mechanics and electricity. Some interest was shown in general construction, salesmanship, and plumbing. It is important to note here that these are the views of the employers and not those of the employees. The enrollment in such programs would be dependent upon the employees' interests and available time. The one program that looked favorable, more so than the others, was the day-trade training program sponsored by the government. This was where the employee received training during the day, with pay, for a specified amount of time. This could work to advantage in several of the areas.

The number of hours worked per week ranges from below 40 to over 60. The union-affiliated jobs and the electricity-electronics area contribute the most to the lower hour-per-week group. The mechanics area contributes most to the higher hour-per-week group. The trend seems to be moving to the 40 hour-per-week group in all areas.

Fringe benefits were not predominate in the trade and industrial areas. Almost 50% of the employers did give vacation time to the employees and 32% gave some form of merchandise discount. Over 38% stated that no fringe benefits were given or that they did not apply to their situation.

Honesty is the quality that employers admire most in an employee. The desire to work, desire to learn and aggressiveness were also among the qualities mentioned most frequently. In similar results, the qualities most lacking in new employees were the desire to learn, desire to work, aggressiveness and appearance. Generally speaking, the employers were pleased with the qualities the present employees demonstrated but seemed somewhat concerned about the qualities of the persons now applying for jobs.

Future Employment

Future employment looks favorable for the up-coming labor force. Over 85% of the employers indicated that qualified employees were not available and 42% indicated that employees of any kind were not available. The employers indicated an increase of 86 more jobs in the next five years, so the potential jobs in the future were tremendous. There is no need for concern about getting a job, but there was a great concern about where the workers would come from to fill these jobs.

The reference of friends of the employer or his employees and the State Employment Service were the two main sources of recruitment of workers. Voluntary appointment and advertising were also used quite frequently. Because of the shortage of workers available, many of the employers used any of the means available to recruit workers.

The desired requirements for prospective employees are: less than a high school education in 36% of the cases; a minimum of a high school education in 44% of the cases; over one year of experience in 50% of the

cases; and no experience required in 24% of the cases. Jobs were available for the non-high school graduate and for those without experience, but a high school education and some vocational training was highly desired.

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APPENDIX A. SCHEDULE

OCCUPATIONAL SURVEY

Name of the organization _____

Person interviewed _____

Persons status in the organization _____

Type of work done by the organization _____

I. Employment.

A. Are workers readily available with the qualities desired?
Yes _____ No _____
Without the qualities desired? Yes _____ No _____

B. What is your main source of recruitment of workers?
State Employment Service _____ Community agency _____
Private agency _____ Voluntary appointment _____
Reference of friends or employees _____ High Schools _____
Technical schools _____ Colleges _____
Advertising _____ Other _____

C. How many new employees could you use now? _____
How many new employees do you think you could use in five years? _____

D. Of the following things, which do you desire in an employee?
Education: College _____ Trade or Technical school _____
High School _____ Less _____
Experience: None _____ Less than one year _____
More than one year _____
Training: Apprentice _____ On-the-job _____ Other _____

II. Employees.

A. How many full time employees do you have now? _____

B. Are your employees union affiliated? Yes ___ No ___

C. Is your work seasonal? Yes ___ No ___
Busy season _____ Slow season _____

D. Are your employees in need of additional training? Yes ___ No ___

E. Do you have an in-service training program? Yes ___ No ___
If so, in what areas? _____

F. Do you see a need for adult night school? Yes ___ No ___
If so, in what areas? _____

G. What is the average number of hours worked by full time employees?
_____

H. What fringe benefits do your employees receive?
Life insurance ____ Health insurance ____ Vacation time ____
Sick leave ____ Merchandise discount ____ Other _____

I. What qualities do you most admire in an employee?
Honesty ____ Cheerfulness ____ Appearance ____ Promptness ____
Loyalty ____ Desire to work ____ Desire to learn ____
Aggressiveness ____ Attitude toward safety ____
Other _____

J. Which of the above qualities do you feel that applicants lack most? _____

III. Attitudes and cooperation in a vocational cooperative program.

A. Would you support a vocational T & I program? Yes ___ No ___

B. Would your staff and facilities be available for training? Yes ___ No ___

C. Could you see a possible use for graduates from this program? Yes ___ No ___

D. Would you consider serving on an advisory committee for one year? Yes ___ No ___